CENTRAL EXPERIMENTAL FARM,

DEPARTMENT OF AGRICULTURE,

OTTAWA, - - - CANADA.

BULLETIN No. 5.

AUGUST, 1889.

To the Honourable the Minister of Agriculture:

Sir,

I have the honour to submit for your approval the fifth Bulletin of the Central Experimental Farm, which has been prepared under my direction by Mr. W. W. Hilborn, Horticulturist of the Central Experimental Farm.

The cultivation of small fruits, but particularly that of the Strawberry, has of late years engaged the attention of a large number of fruit growers and farmers in Canada, many of whom have found in this occupation a considerable source of profit. The fact that this useful fruit can be successfully grown in almost every settled part of the Dominion, makes it important that practical information regarding the best methods of cultivation and the most profitable varieties to grow, should be widely disseminated. The information submitted herewith by the Horticulturist contains the conclusions reached by him from long experience as a practical fruit grower, and embodies also the results of the tests and observations which have been carried on for the past two years at the Central Experimental Farm, during which period all the varieties of strawberries named and described in the Bulletin have been carefully tested.

The principles which underlie successful strawberry culture for market purposes are duly set forth, also the best methods of growing strawberries for home use on the farm. By adopting the methods of cultivation here recommended, every farmer could with very little labour, furnish his household with an ample supply of delicious fruit for several weeks during the heat of early summer when such an addition to the diet is most healthful and necessary.

Most of the figures used in this Bulletin have been engraved from photographs of berries grown on the Experimental Farm, and show the exact size of good samples of the several varieties.

I have the honour to be,
Your obedient servant,

WM. SAUNDERS,
Director.

Ottawa, 12th August, 1889.

CENTRAL EXPERIMENTAL FARM.

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DEPARTMENT OF AGRICULTURE,

OTTAWA, - - - CANADA.

STRAWBERRY CULTURE.

BY W. W. HILBORN,

Horticulturist, Central Experimental Farm, Ottawa.

The strawberry can probably be grown over a larger area than any other fruit, hence it is scarcely practicable to give any one method of cultivation which will be entirely satisfactory in every locality. There is so much variation in climate, soil, etc., in different parts of the Dominion, that the system of cultivation must be varied to some extent to suit the circumstances. This plant requires a cool, rich, soil, moist, but not wet, with room to grow. The weeds must be kept down and protection afforded from sudden changes of tem perature, resulting in alternate freezing and thawing during the winter and early spring. If these conditions are secured and suitable varieties planted, success is almost sure to follow.

SOIL

Any soil that will produce a good crop of potatoes or other vegetables will answer for strawberries. It should be well drained, either naturally or by tile drains. A rich clay loam is preferable and will usually give the largest yield, but the fruit will not ripen as early as on sandy loam. Avoid if possible a stiff, heavy clay. While a clay loam will give the best results if properly managed, it will not prove satisfactory unless it is well drained and the soil thoroughly prepared in the autumn previous to planting.

PREPARATION OF THE SOIL.

For profitable growing on a large scale, select a piece of well drained clay loam. This should receive a heavy coating of manure in the spring and then be either summer-fallowed or planted with potatoes, vegetables, or some other early crop which can be removed in time to permit of a proper preparation of the land in autumn before it becomes too wet with fall rains. A sub-soiler should follow the common plough, one that will stir up the sub-soil to the depth of five to ten inches without bringing any of it to the top. Subsoiling is not absolutely necessary, but land thus loosened up will retain moisture longer in time of drought and dry off much more rapidly after heavy rains. The last ploughing in the fall should be thoroughly done and suitable furrows provided, so that all surface water may run off quickly. Early in the spring, as soon as the weather and the condition of the soil will permit, cultivate deeply both lengthwise and crosswise with a two-horse cultivator; harrow down smooth and the land will be ready for planting. Avoid ploughing a heavy soil in the spring for immediate planting.

Gravelly or sandy loam should be heavily manured in the spring, and may be planted with vegetables. All weeds should be kept down during the summer. Plough in the fall and again in the following spring, and harrow thoroughly. No subsequent tillage will make up for inadequate preparation of the soil for strawberry culture. A stiff clay loam is more difficult to manage. A crop of clover or other green manure turned under will help to make the soil more friable. Coarse barnyard manure should also be used whenever it can be applied in time to decompose and become well mixed with the soil before planting. Tile drains in such soil require to be much nearer together and should not be too deep, usually not much more than two and a-half feet. In the autumn, before the land becomes too wet, trench it up in high narrow ridges; if done with the plough, turn two furrows together forming a sharp ridge as when prepared for carrots or other roots. Surface drains should be made to take off surplus water quickly. When thus exposed to the action of the frost, a comparatively heavy soil will work down fine and mellow in the spring and give good results. Care must be taken, however, never to stir such soil when wet, either with hoe, plough or cultivator.

TIME TO PLANT.

Plant as early in the spring as the land can be prepared, as this gives

the whole season for growth, and enables the plants to produce a full crop the following year. Fall planting, if done in August, will yield a small crop the following spring, but seldom enough to pay for the extra labour required. The principal objection to fall planting is that the plants do not make sufficient root growth to prevent them from lifting in the soil with the repeated freezing and thawing to which they are exposed during the winter and early spring. In any locality where no difficulty is likely to occur from this cause, autumn planting may often be praticed with advantage.

METHODS OF PLANTING.

Several different systems have been practiced successfully. The method of planting should be regulated by the quantity of land to be used, the amount of labour and manure at the disposal of the planter, the varieties to be planted, whether for market, or for a city garden, or on the farm for family use.

HILL SYSTEM.

For a city garden, where land is usually scarce, the hill system will generally give very satisfactory results. Plant in rows two feet apart and twelve to fifteen inches apart in the row. Cut off all runners before they have time to take root, thus enabling the plants to make strong stools or hills by the end of the growing season. Any blossoms which appear the same season of planting should be removed. In an unfavorable locality, where much alternate freezing and thawing is likely to occur during winter and early spring, growing in hills is not always successful, as they are more likely to heave with the frost, and the plants do not afford the same protection to each other as when planted in matted rows.

MATTED ROWS.

For this mode of culture, the rows require to be from two and a-half to four feet apart, and the plants twelve to fifteen inches apart in the row. Cut off any blossoms which may appear, also the first runners, until the plants have gained sufficient vigor to send out several strong runners at once, when they should be allowed to take root and form a matted row from six to twelve inches in width. All free growing sorts make too many plants and should have all surplus runners cut off. The plants should not be crowded in the row. From three to six inches apart each way will give the required protection to each other and room to produce fruit of large size and in abundance.

GROWING STRAWBERRIES ON THE FARM FOR FAMILY USE.

There is probably no other class of the community so poorly provided with this fruit as farmers. This should not be the case, as strawberries can be grown with so little expense and trouble, that no one who has land should be without a sufficient supply. Much difficulty has been experienced by some in keeping up a strawberry plot for family use, for the reason that the usual method has been to plant strawberries in some out-of-the-way corner or enclosure where all the work has to be done by hand, and where they rarely get any attention after the first season, except to gather such fruit as may ripen. By the end of the third season the plants will generally be so exhausted, that but little fruit is produced, and the young plants seldom possess that vigor required for starting another plantation successfully, hence they are often given up as too troublesome.

If the following system is adopted, a crop of strawberries can be grown as easily as one of potatoes and with as little risk of failure :— Select the best piece of land procurable, where the plants can be cultivated with a horse cultivator in the same manner as corn or potatoes. For a family of ten or twelve persons, four rows two hundred feet long will give an ample supply for from three to five weeks, if suitable varieties are selected and reasonable cultivation given. Suppose the plot chosen to be forty feet wide and two hundred feet long. Plant four rows, covering one-half of the plot, as early in the spring as possible, four feet apart and one foot apart in the rows.

Cut off all the blossoms and first runners until the plants have sufficient strength to send out several strong runners at once (which is usually in July) when these may be allowed to take root. Stir the soil occasionally with the cultivator and keep the ground free from weeds. The second half of the plot should be well manured and planted with potatoes, and after these are dug in the fall the land should be prepared for planting in the following spring. Plants of the best quality can be obtained from those first planted for this second plot. By following this system a full crop of fruit can be gathered in about fourteen months from the time of planting.

As soon as the last berry is picked, plough up the first plantation, add manure and again prepare the land for planting the following spring. But one crop of fruit is taken from the plants and less time is required in putting out a new plot every spring than in cleaning out the old one. With this method there is no difficulty in keeping

up a supply of strong and vigorous plants for replanting—a most important point in successful strawberry culture. A plantation can be made to bear well for several seasons by cleaning out the rows as soon as the last fruit is gathered, cutting them down to about six inches in width and giving thorough cultivation until the autumn; but more experience is required to manage the plants under this method than with the renewal plan.

One row each of the following varieties:—Crescent, Wilson, Captain Jack, and Manchester, will make a collection that will give a succession of fruit for a month in a favourable season. In any locality where other sorts are known to succeed and are more easily obtained, they can be used in place of those named. It is of great importance to procure plants as near home as possible, or from those who will take much care in packing them. Failure is often due to the careless handling of the plants while out of the ground or to want of care in packing them.

PLANTING.

After the land has been well prepared, mark off with a corn marker, or stretch a line to plant by. Take pains to have the rows straight; it adds to the appearance of the plot and time is also saved in the cultivation. Trim off all dead leaves and old runners from the plants; shorten the roots to three or four inches, keep them moist and where the wind cannot reach them while out of the ground. When planting, make a hole deep enough to admit the roots without doubling them up. Take the plant in the left hand, place the crown on a level with the surrounding soil, spread the roots out fan shaped, fill in the soil, working it in among them, and press so firmly that by giving a quick jerk on a leaf it will break off without moving the plant. Only plants of the previous year's growth should be used.

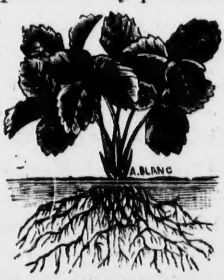

Fig. 1.

Fig. 1 shows the correct way of setting the plant. In fig. 2, the roots are all in a bunch instead of being spread out evenly as in fig. 1. They cannot, therefore, make such a vigorous growth. When planted too deep, as in fig. 3, they are nearly always smothered and will rot off at the crown. In fig. 4, the crown is above the level of the surrounding soil and therefore too high. When thus planted they generally wither and die in a few days.

Fig. 2.

Fig. 3.

Fig. 4.

CULTIVATION.

Nearly all soils are full of weed seeds. When these germinate and appear above ground, cultivation should begin. Frequent stirring of the soil will destroy these weeds, and during drought will cause sufficient moisture to be retained in the soil to enable the plants to make a strong growth,

Never allow weeds to grow in the strawberry patch. Cultivate carefully and thoroughly. By running the cultivator the same way every time, the plants that are newly rooted will not be so readily disturbed. Care must be taken not to stir the soil immediately around the plants, especially early in the season, as this is often the cause of their making feeble growth.

MULCHING.

The crop of strawberries will very much depend on how well the plants have been protected during the winter and early spring. It is not the severe freezing that injures the plants so much as the oft-repeated freezing and thawing. The use of a mulch of coarse manure, marsh hay, or clean wheat straw, is most effectual in preventing injury from this cause. Oat straw generally packs too closely and does not admit air freely enough to either soil or plants, especially on heavy land. As soon as the ground freezes in the autumn sufficiently hard to prevent horses and waggon from breaking through the crust, the mulch should be applied. Most of the material should be placed between the rows with just enough immediately over the plants to nearly cover them from sight. Before growth begins in the spring, draw the covering off from the plants and let it remain between the rows until after the fruit has been gathered; it thus serves the triple purpose of keeping the fruit clean, the soil cool and causes it also to retain longer the moisture gathered early in the

season—which is all important to the production of a large crop of fruit.

In localities where late frosts are likely to occur at the time of blossoming, the mulch should be removed just before growth begins in spring and very shallow cultivation given. The soil becomes warmer when thus loosened and the blossoms often escape a frost, when the land is thus treated, which would otherwise injure them to a considerable extent.

BLOSSOMS.

Fig. 5. Bi-sexual.

Fig. 6. Pistillate.

Strawberry blossoms are divided into classes, 1st, bi-sexual or perfect. These contain stamens or male organs, and pistils or female organs, as in fig. 5, hence are called perfect or bi-sexual, marked thus (B). 2nd, pistillate or imperfect, which contain pistils only, or female organs, as in fig. 6. Pistillate varieties usually yield the largest crops of fruit when properly fertilized. This may be done by planting one or more rows of a perfect-flowering sort to every four or five rows of those with imperfect blossoms.

LIST OF VARIETIES.

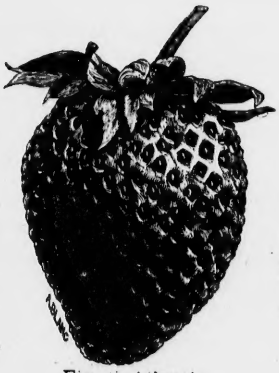

Fig. 7. Atlantic.

ATLANTIC (B).—Fruit medium to large, conical, bright dark crimson, of good quality, nearly or quite as firm as Wilson. Season medium to late. Plant a strong grower and quite productive; sometimes the foliage is injured by rust; worthy of a more extended trial.

Fig. 8. Annie Forrest.

ANNIE FORREST (B).—Fruit large, conical, bright scarlet, colours on all sides at once, medium to good quality, firm as Crescent; medium early. Plant a vigorous grower and quite productive; worthy of trial for market.

AMATEUR (P).—Fruit of large size, round, light scarlet, good quality, not firm enough for market. Plant a strong grower, quite productive; often suffers from rust; of value only for the amateur.

BIG BOB (P).—Fruit of large size, bright scarlet, good quality. Plant only moderately vigorous; sometimes productive; not usually reliable.

BLACK GIANT (B).—Fruit large to very large, often irregular in form, very dark red, seeds quite prominent, the large berries are apt to be hollow in the centre; of good quality. Plant only moderately vigorous; not very productive.

BELMONT (B).—Fruit medium to large, conical or egg-shaped, good quality, dark crimson, quite firm. Plant quite vigorous, but not productive enough to be valuable either for home use or market.

Fig. 9. Bubach.

BUBACH (P).—Fruit large to very large, roundish or broadly conical in form, sometimes uneven on the surface, but never misshapen; bright red; quality medium to good, not firm enough for distant market; ripens medium early. Plant very strong and vigorous, foliage healthy and withstands the hot, dry weather remarkably well; very productive. All points considered, it is one of the best sorts tested here for a near market or home use.

BANCROFT (P).—Fruit of medium to large size, somewhat of the Manchester type. Plant not vigorous or productive enough to make it of any special value.

BOYDEN (B).—Fruit medium to large, dark red, good quality. Plant is not vigorous nor is it productive enough to make it valuable.

BRIGHT IDA (B).—Fruit medium to large, bright scarlet, medium quality. Plant vigorous and productive. Succeeds best on a rich loam. Blooms early and is therefore liable to injury by late spring frosts.

BORDELAISE (B).—Fruit small to medium, conical very dark red, almost a purple when fully ripe; very good quality; it has a very high musky flavor that is much admired by some. Plant vigorous and healthy; not very productive. It is a foreign variety of the Hautbois type and one of the best of its class.

BIDWELL (B).—Fruit large to very large, ovate conical in form, sometimes irregular; colour light crimson, becoming quite dark when fully ripe; of good quality; flesh moderately firm. Plant strong, vigorous and productive; succeeds best on rich clay loam, with very narrow row or hill culture.

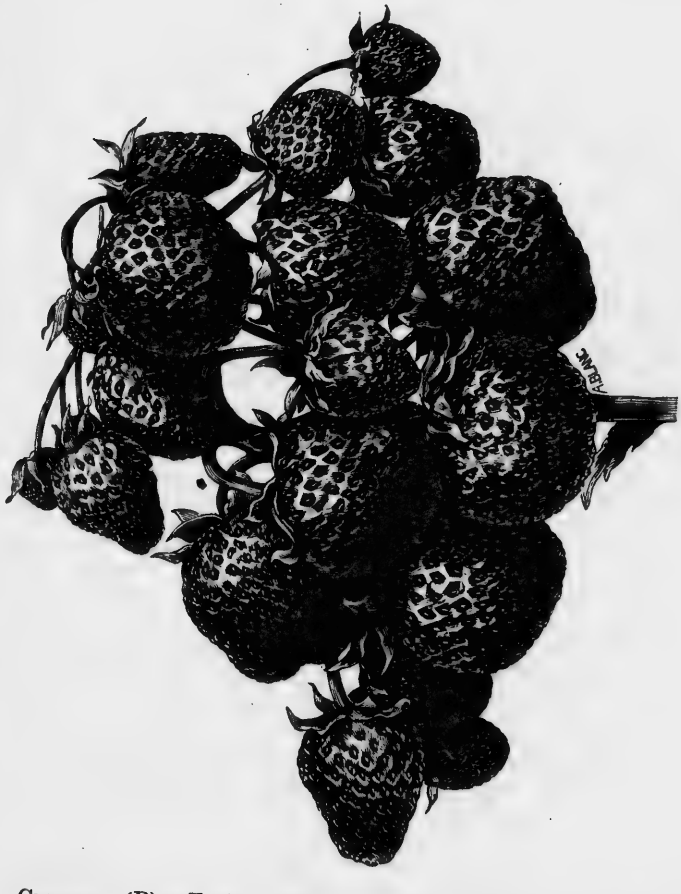

Fig. 10. Crescent.

CRESCENT (P).—Fruit medium to large, conical, colour bright scarlet; colours on all sides at once, which is a great advantage in gathering the fruit; only medium in quality; flesh moderately firm if it is not allowed to become too ripe; season early to medium late Plants very vigorous and multiply rapidly; should not be allowed to mat too closely for best results. The most productive of any variety yet fully tested; one of the best for home use or market.

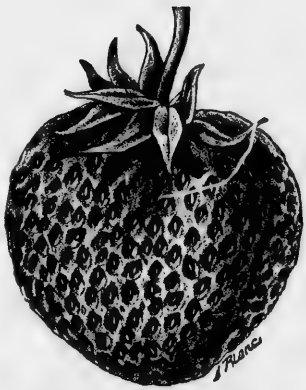

Fig. 11. Captain Jack.

CAPTAIN JACK (B).—Fruit medium to large, of regular form; bright red in colour, medium quality, fully as firm as Crescent; season medium to late. Plant strong and vigorous, very productive, succeeds best on a rich clay loam, valuable for market or home use.

CORNELIA (P).—Fruit large, of regular form, colour red, quality medium, ripens late. Plant not vigorous or productive, subject to rust.

CUMBERLAND (B).—Fruit large to very large; form ovate conical, regular and uniform; colour light red; of good quality; flesh moderately firm; season medium. Plant strong, vigorous and moderately productive.

CONNECTICUT QUEEN (B).—Fruit medium; colour, a dull greenish red, unattractive; good quality; season medium to late. Plant very vigorous, not very productive.

CHARLES DOWNING (B).—Fruit medium to large, conical, good quality, not firm enough for market. Plant a strong grower, but very much affected by rust, moderately productive.

COVILL (B).—Fruit large at first picking, but does not hold out well in size later in the season, colour dark red, good quality, ripens very early. Plant strong, vigorous and quite productive, should be grown on rich soil, in narrow rows, its earliness will make it valuable for market, ripening as it does, several days ahead of Crescent.

CHAMPION (B).—Fruit of medium size, conical, light red, medium to good quality, moderately firm, ripens medium to late. Plant a strong grower, quite productive, suffers considerably from rust.

Fig. 12. Crawford.

CRAWFORD (B).—Fruit large to very large, bright scarlet, colours up on all sides at once; medium to good quality, quite firm; season late to very late. Plant strong and vigorous with healthy foliage, quite productive; worthy of trial for near market and home use.

DANIEL BOONE (P).—Fruit medium to large, conical; colour bright red; good quality, not very firm when fully ripe; season medium. Plant strong and vigorous, foliage suffers from rust to a considerable extent; moderately productive.

DOWNER'S PROLIFIC (B).—Fruit medium to large; colour light red; medium to good quality, not firm enough for market; ripens medium early. Plant a strong grower, but suffers from rust; productive.

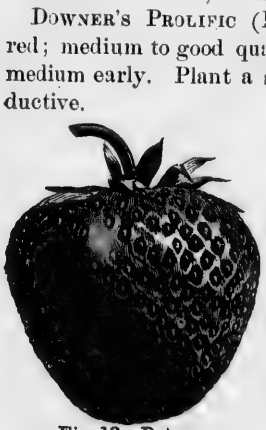

Fig. 13. Daisy.

DAISY (P).—Fruit large; colour bright red; medium to good quality, quite firm; ripens medium early to late. Plant quite vigorous and productive; worthy of an extended trial for market and home use.

EMERALD.—Blossoms nearly pistillate. Fruit of medium to large size of the Manchester type; colour light red; medium in quality and in firmness. Plant is not a strong grower and suffers from rust to such an extent that it is of little or no value here.

EXCELSIOR (P).—Fruit medium in size, round, poor quality, not firm enough for market. Plant vigorous and productive.

EARLY CANADA (B).—Fruit medium in size, very dark red, quite acid, flesh firm; season early. Plant only moderately vigorous, suffers badly from rust. It blossoms very early, and is, therefore, more liable to injury by late spring frosts.

ENHANCE (B).—Fruit large to very large, very irregular in form; colour dark red; poor to medium; flesh firm; season medium to late. Plant very vigorous and hardy, very productive.

FAIRY (P).—Fruit medium in size; colour nearly white in the shade, when fully ripened in the sun the berries are a pretty pink; quality good; flesh soft, ripens medium to late. Plant vigorous and moderately productive.

GOLD (P).—Fruit large, nearly round, of regular form; colour bright scarlet; quality good to very good; flesh firm; season medium to late. Plant only moderately vigorous, rather tender, requires to be well protected; fairly productive.

GANDY (B).—Fruit medium to large; colour bright red; flesh firm, medium to good quality; season late to very late. Plant very vigorous and quite healthy, only moderately productive.

GREEN PROLIFIC (P).—Fruit medium to large, light red, medium in quality, too soft for market. Plant a strong grower, productive, suffers much from rust.

GOLDEN PROLIFIC (P).—Fruit medium to large in size, round, slightly conical; colour bright red with golden seeds, of very fine appearance. Plants vigorous but only moderately productive; where it succeeds it is one of the best for table use.

GRAND DUKE (P).—Fruit of medium size, and good quality. Plant only moderately vigorous and productive.

HAVERLAND.—Blossoms nearly pistillate; fruit large, of regular conical form, bright scarlet; quality medium; flesh not very firm; season early to late. Plant very strong and vigorous; very productive; fruit stocks rather weak. This variety is worthy of trial for a near market.

HAMPDEN (P).—Fruit medium to large; form oblate conical; colour dull red, quite acid. Plant is not vigorous enough to be of much value.

HOFFMAN (B).—Fruit small to medium, quite acid. Plant quite a strong grower, suffers somewhat from rust. This variety is not of any special value.

HENDERSON (B).—Fruit large, pyramidal with neck; colour bright red, does not ripen evenly, very good quality. Plant only moderately vigorous and productive, of no value for market.

ITASCA (B).—Fruit medium in size, good quality. Plants quite vigorous in growth, but unproductive. The blossoms of this variety

are not very well supplied with pollen, the stamens drop off soon after the flower opens, which gives it the appearance of a pistillate sort.

JUMBO (B).—Identical with Cumberland.

JAMES VICK (B).—Fruit medium in size; bright glossy red; medium quality; quite firm. Plant very strong, vigorous and healthy; requires to be grown in very narrow matted rows, or in hills, otherwise the fruit will be too small.

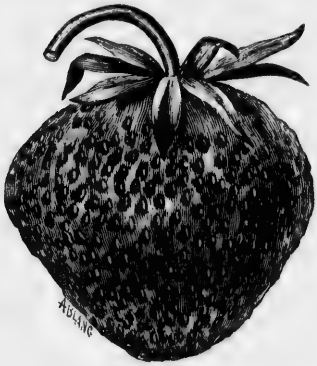

Fig. 14. Jewell.

JEWELL (P).—Fruit large to very large; colour beautiful bright scarlet; medium in quality, moderately firm for a large berry; season medium to late. Plant strong and vigorous, produces but few runners; suitable only for narrow row or hill system; very productive.

JERSEY QUEEN (P).—Fruit large to very large; colour scarlet; good quality, moderately firm; season late. Plant healthy, only moderately vigorous; fairly productive.

Fig. 15. Jessie.

JESSIE (B).—Fruit medium to very large in size, irregular in form. bright crimson, good quality, flesh quite firm; season medium early. Plant a strong grower, only moderately productive.

This variety has not come up to expectation in this locality.

KENTUCKY (B).—Fruit medium to large, rather light in colour; season late. Plant a strong grower, often injured by rust; not very productive.

KING OF THE NORTH.—This variety suffers to such an extent from rust that it is of no value here.

LACON (B).—Fruit large, irregular, dark red, medium quality, quite acid, moderately firm in flesh. Plants grow to an immense size with good cultivation and produce abundantly; does not withstand drought as well as most varieties.

LEGAL TENDER (B).—Fruit small; plant vigorous, only moderately productive.

Fig. 16. Lida.

LIDA (P).—Fruit medium to large, bright glossy red, medium quality; season medium early. Plants only moderately vigorous, but very productive.

LONGFELLOW (B).—Fruit large, elongated, with neck; dark red; good quality, medium in firmness. Plant not very vigorous or productive, does best on rich clay loam.

Fig. 17. Manchester.

MANCHESTER (P).—Fruit large, oblate conical, of regular form; colour light scarlet; good quality, subacid. Plant vigorous and very productive, a good market sort where it succeeds; in many localities the foliage rusts to such an extent that the crop is very much injured.

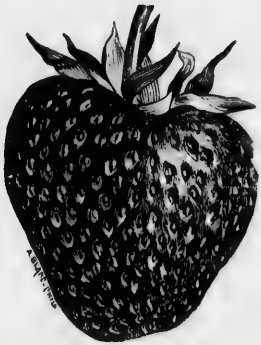

Fig. 18. May King.

MAY KING (B).—Fruit medium in size, conical, light red, with white tip, good quality, flesh quite soft. Plant very healthy and vigorous, not very productive.

Fig. 19. Maggie.

MAGGIE (B).—Fruit medium to large, sometimes very large, irregular in form; colour dull red; quality medium to good, flesh quite soft, will not bear shipping to a distant market; season early to medium. Plant very vigorous, healthy and productive.

MARY FLETCHER (B).—Fruit medium to large; colour dark bright red; good quality; season medium. Plant quite vigorous, moderately productive, foliage often injured by rust.

MRS. GARFIELD (B).—Fruit medium to large. Plant not sufficiently vigorous and healthy to be valuable.

MT. VERNON (B).—Fruit medium to large, oblate conical; red in colour; quality medium, flesh quite firm; season late to very late. Plant very strong and vigorous, quite productive; a valuable late sort for either home use or market.

MONTREUIL (B).—Fruit very small; dark red when fully ripe; a variety of the alpine; of a peculiar flavour, not admired by the majority of of people.

MAMMOTH (B).—Fruit medium to very large in size; dark red; good quality; season medium. Plant not very vigorous, suffers much from rust; moderately productive.

MINERS' PROLIFIC (B).—Fruit medium to large; dark bright red; good quality, not firm enough for market; season medium. Plant quite vigorous and moderately productive, foliage suffers somewhat from rust.

MRS. CLEVELAND (P).—Fruit medium to very large, irregular, scarlet, good quality, flesh moderately firm; season medium to late. Plant strong and vigorous; foliage quite healthy; productive this, its first season on trial at the farm; quite promising.

Fig. 20. Monmouth.

MONMOUTH (B).—Fruit medium to large, of uniform conical form; bright crimson; good quality, flesh quite firm; season very early. Plant vigorous and healthy, but not large, quite productive, a promising early variety for either home use or market.

NEW DOMINION (B).—Fruit large, oblate conical, regular form; colour bright scarlet; good quality; season late to very late. Plant vigorous in growth, foliage sometimes injured by rust; quite productive, succeeds quite well in this locality.

NORMAN (B).—Fruit large, conical, colour dark glossy red, good quality; flesh quite firm; season medium early. Plant only moderately vigorous; foliage rusts to some extent; not productive enough for market.

NICANOR (B).—Fruit small, bright red in colour; season early. Plant not very vigorous, moderately productive.

OLD IRONCLAD (B)—.Fruit medium in size; colour crimson; medium quality, flesh quite firm; season early. Plant very vigorous and healthy, not productive enough to be valuable.

OHIO (P).—Fruit medium size; form round, slightly conical; colour bright red; medium quality, rather acid; season late. Plant strong and vigorous, quite productive; foliage injured to quite an extent by rust.

ONTARIO (B).—Fruit and plants of this [illegible] resemble Sharpless so closely that it appears to be identical with that variety.

PIPERS (B).—Fruit small, dark red in colour, medium quality, quite acid. Plant vigorous and productive; fruit not large enough for market.

PRINCE OF BERRIES (B).—Fruit medium to large in size, dark red in colour, quality very good, flesh dark red, quite firm. Plant only moderately vigorous, foliage healthy, not very productive.

PARRY (B).—Fruit large to very large; form oblate conical, quite regular; colour light scarlet; good quality, moderately firm; season medium early. Plant moderately vigorous, quite healthy, fairly productive; this sort does not appear to be very hardy, requires to be well protected during winter.

Fig. 21. Pineapple.

PINEAPPLE (B).—Fruit medium to large, irregular in form; colour light red or pink; good quality; somewhat resembling pineapple; not very firm; season medium to late. Plant very vigorous and healthy, sometimes quite productive; not reliable.

PHOTO.—Blossoms nearly pistillate. Fruit large to very large; dark glossy red; good quality, not very firm. Plant only moderately vigorous, foliage suffers to quite an extent from rust.

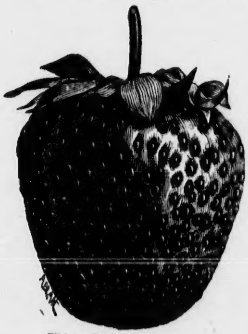

Fig. 22. Pearl.

PEARL (B).—Fruit medium to large in size, obtusely conical; colour bright scarlet; good quality, quite firm; season medium early. Plant a very strong grower, none more vigorous, foliage healthy, very productive, well worthy of trial for market.

ROYAL HAUTBOIS (B).—Fruit small to medium in size, very dark red or purple when fully ripe; quality very good, of a high musky flavour. Plant quite vigorous and healty, not productive, a foreign variety of little value for this locality.

RAY'S PROLIFIC (B).—Fruit medium in size and quality; foliage injured by rust to such an extent that it is of no special value here.

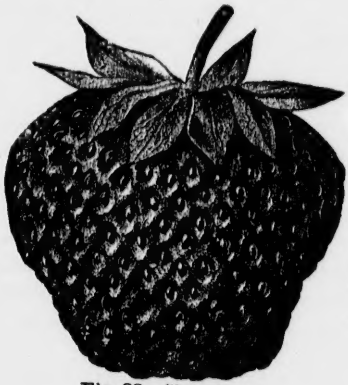

Fig. 23. Sharpless.

SHARPLESS (B).—Fruit large to very large, irregular in form; colour crimson; good quality, moderately firm; season late. Plant very large and vigorous, foliage healthy; requires rich soil and good cultivation; well adapted to hill culture; blossoms more easily injured by late spring frosts than most sorts.

SENECA QUEEN (B).—Fruit large to very large, form roundish to flattish; colour very dark red; good quality, quite firm; season medium. Plant very vigorous and productive, succeeds best on sandy loam; on such soil it is one of the best amateur sorts.

STERLING (P).—Fruit large, of regular conical form; coloqr scarlet; quality very good. Plant not very vigorous or productive, foliage suffers much from rust.

SUNAPEE (B).—Fruit medium in size, conical; dark red; good quality, firm in flesh; season medium. Plant a strong grower, foliage suffers considerably from rust, not as productive as Wilson, quite distinct in foliage and fruit from that old standard sort.

SHIRTS (B).—Fruit large, long conical with neck; colour very dark red; good quality, moderately firm; season medium early. Plant not very hardy, nor vigorous, moderately productive.

SUMMIT (P).—Fruit very large; form obtusely conical, never misshapen, very uniform; colour light scarlet; good quality; flesh moderately firm; season medium. The plant is not large and suffers some from rust, moderately productive.

SNOW FLAKE (B).—Fruit medium in size; colour bright scarlet, very white inside, flavor good to very good; season medium. Plant moderately vigorous and productive, valuable only for the amateur.

SURPRISE (B).—Fruit medium to large; colour dark red; quality good. Plant only moderately vigorous and productive.

SUCKER STATE (B).—Fruit medium in size, bright scarlet, medium quality; plant quite vigorous and productive.

TRIOMPHE DE GAND (B).—Fruit large to very large, conical, often flattened; colour glossy crimson; flavor good to very good, flesh quite firm. Plant only moderately vigorous and productive, should be grown on rich soil and in hills.

VINELAND (B).—Fruit medium in size, medium quality, season late. Plant moderately vigorous; foliage injured considerably by rust.

Fig. 24. Wilson.

WILSON (B).—Fruit medium to large, conical, dark red, quality good when fully ripe; as usually gathered for market, it is quite acid; very firm. Plant vigorous and productive; foliage sometimes injured by rust.

This sort should have rich soil and good cultivation; one of the best market sorts.

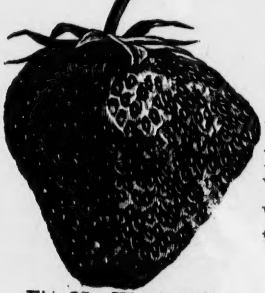

Fig. 25. Woodruff.

WOODRUFF (B).—Fruit medium to large, irregular in form, often wedge shaped; bright, glossy crimson; good flavour; flesh very firm; season medium early to medium late. Plant only medium in size, but very vigorous and healthy, very productive; well worthy of a trial for market, also one of the best for home use.

WINDSOR CHIEF (P).—Fruit medium in size, form round, regular; colour dark red; flavour quite acid, but rich when fully ripe; flesh quite firm. Plant only moderately vigorous and productive; foliage suffers from rust.

WONDERFUL (P).—Identical with Windsor Chief.

WARFIELD'S No. 2 (P).—Fruit large in size; colour dark red; good quality; flesh quite firm. Plant strong, vigorous and productive; worthy of trial for market.

WOODHOUSE (P).—Fruit medium in size; form conical; colour bright scarlet; medium quality, quite firm; season medium to late. Plant vigorous and productive. This sort is worthy of trial for market, its even size, fine appearance and productiveness are its good points.

WHAT VARIETIES TO PLANT.

It is very difficult to give a list of varieties that will be equally suitable for all localities. Differences in soil, climate and manner of cultivation should be taken into consideration, also the purpose for which they are grown, whether for market or home use. For market purposes, *Crescent*, *Captain Jack*, *Wilson* and *Manchester*, have been perhaps the most satisfactory of the old well tested sorts. The foliage of the *Manchester* has been quite subject to rust in many localities; where the plants are thus affected to any great extent, some other kind should be substituted. It is best for those who grow strawberries for market to test a number of the leading sorts in a small way and plant most largely of those best adapted to their locality.

WOODRUFF has been one of the most profitable varieties here, either for home use or market. Among the newer sorts, *Bubach*, *Pearl*, *Haverland*, *Crawford*, *Warfield*, *Jessie*, *Monmouth*, *Ohio*, *Daisy*, *Gandy*, and *Woodhouse*, are prephaps among the most promising, and valuable about in the order named. Many other sorts have some good qualities, but those named above appear to possess a greater combination of good points, and those who grow for market would do well to give them a trial.